

### **Problem Addressed:**

Upgrading K-12 STEM (Science, Technology, Engineering, Math) education has been identified, both nationally and locally, as a critical need. The very influential National Academies report "Rising Above The Gathering Storm: Energizing and Employing America for a Brighter Economic Future" (2006) provides a convenient summary.

Arousing youngsters' interest in STEM subjects however has to begin in the early K-12 years. Supporting data for this need is over-whelming.

Many studies have shown that hands-on experiences are the best tools for teaching science and technology. Teachers, however, especially in the North Alabama area, have very little access to materials and equipment required by hands-on approaches.

The HATS STEDTRAIN Program provides grants to K-12 teachers in the north Alabama area for hands-on science and thus directly addresses the problem.

### **The HATS STEDTRAIN Seed Grant Program:**

In the first months of every year the HATS STEDTRAIN Committee issues a Call for Proposals to K-12 schools in the north Alabama area for innovative projects that will "seed" students enthusiasm for science and technology. The grant application is a simple on-line form. Grant amounts requested can range up to \$1000. HATS supplies administration and donors supply funding.

Proposals are evaluated and rated by STEDTRAIN volunteers according to strict criteria. STEDTRAIN volunteers also conduct follow-up visits to grantee teachers' classrooms. Grantees report on their projects by means of mid-term reports and by brief overviews of their projects with PowerPoint presentations at an annual STEDTRAIN Conference.

The program presently is focused on the five north Alabama counties of Jackson, Madison, Marshall, Morgan, and Limestone and Lincoln County in southcentral Tennessee. The program has been in existence since 1988.



**Please help HATS fund as many of the quality projects proposed as possible.**

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Telephone \_\_\_\_\_

E-Mail \_\_\_\_\_

Amount of Donation \_\_\_\_\_

Donation type? Corporate \_\_\_\_\_ Individual \_\_\_\_\_

**Make check out to  
STEDTRAIN Seed Grants**

**Mail:** STEDTRAIN  
P.O. Box 1964, Huntsville, AL 35807

Donations are tax-deductible.  
HATS is a 501(c)3 non-profit

**The Huntsville Association of Technical Societies'**

## **STEDTRAIN Program STEM Grants for K-12 Schools**

**Exciting Children's Interest  
in Science and Technology**



The 34 year old HATS STEDTRAIN Program has since 1988 raised and administered funds totaling over \$624,000 for more than 599 STEDTRAIN STEM Grants and other worthy K-12 programs in the north Alabama area.

The STEM grants and other activities are currently benefiting an estimated 1500 students directly and about 5,000 indirectly each year.

## What teachers say about the program.

“Children with Attention Deficit Hyperactivity Disorder, autism, conduct and emotional disorders were able to stay on task when using iPads.”

*Lyn Crawford Nova Academy Project:  
Teaching Math with Technology*

“Exposure to aerospace is having a positive impact on students' career choices, as 81% of past participants plan/are pursuing careers in science, technology, engineering, and/or math.”

*Barbara Murphy Westlawn Middle  
School Project: Student Teams for  
TARC*

“You allow the student and teacher relationship to grow--which is the number one indicator of student success as stated by research. “

*Mary Lee, New Market School Project:  
Virtual Educational Experiences*

“I love the HATS STEDTRAIN grant program and feel it is an essential grant for any classroom teacher.”

*Kimberley Van Hooser Central School  
Using iPads as an Infinite Science Tool*

“On the bridge project, one boy was so involved. He talked to a family friend, who happened to be an architect, for over an hour about his design. The parents have been very supportive and pleased with the hands-on approach we are taking.”

*Susan Penfield Excalibur  
Christian School Experiencing  
Physical Science*

## It's amazing what STEDTRAIN Grants enable teachers and students to accomplish!

The Cyber Patriot team from Grissom High School was the only team from the entire Southeast Region to qualify for the Semi-final National Youth Cyber Defense Competition.

A Huntsville Center for Technology team was the only one from America to compete in the 2013 Greenpower electric car race sponsored by the Greenpower Education Trust in England.

A team of students from Butler and John Paul II Catholic High Schools, and Westlawn and Hampton Cove Middle Schools won 11th place out of 625 teams in the 2013 Team America Rocketry Challenge (TARC), a national competition. The team is now also preparing two experiment payloads to be launched July 26, 2014 on a United Launch Alliance (ULA) rocket.



**We put a man  
on the moon.**

**Help our  
children reach  
the stars!**

## Hands-On Science Join with us to make it happen!

**Huntsville Association of Technical Societies**  
(HATS) is a 501(c)(3) non-profit organization

### STEDTRAIN

Science and Technology **E**ducation and **T**RAINing, STEDTRAIN is a committee of HATS administering the program and staffed entirely by volunteers. New volunteers always welcomed.

### STEDTRAIN Conference

The Conference is a forum for teachers, committee members, and the public to learn about the program, exchange information, and network.

Program includes: Featured Speaker Reports on STEDTRAIN Research Project(s) Presentations on Seed Grant projects Held annually in the Spring. Public encouraged to attend. No admission charge.

### For more information or to arrange a public presentation on the program:

**Paul Agarwal**  
nasa\_docent@yahoo.com  
256.651.5693

**Ron Hackett**  
ron@rhackett.net  
931.438.3298

**Please send donations  
STEDTRAIN Program  
P.O. Box 1964 Huntsville, AL 35807**

**STEDTRAIN and HATS Websites:**  
<https://www.stedtrain.org>  
<https://www.hats.org>